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## **Sun-spiders of Sudan (Arachnida: Solpugida) [Introductory study]**

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### **Abstract**

This work includes a list of 25 species of 12 genera of 4 families of order Solpugida recorded from Sudan. Fifteen species are endemic. The distribution of every species is included. A key to the recorded families, genera and species is prepared.

**Keywords:** Sun-spiders, Solpugida, Arachnida, Sudan.

### **Introduction**

My first visit to Sudan (23 July - 10 August 2008) activated me to get an idea about its arachnological fauna. I could find only a few papers dealing with arachnids of Sudan, especially its sun spiders. Hence, the following work is prepared to present a list of sun spiders species previously recorded from Sudan with keys to families, genera and species depending on the works of Roewer (1933, 1934), Turk (1960) and El-Hennawy (1990, 1999).

This preliminary list is mainly extracted from the works of Roewer (1933, 1934, 1941), El-Hennawy (1999) and Harvey (2003) in addition to the work of Benoit (1964). It includes 25 solpugid species classified within 12 genera and 4 families. Fifteen species are endemic, only recorded from Sudan. The distribution of every species in Sudan is included in the list after species name. After the list and key to families, a simplified catalogue of solpugid Sudanese species is presented including main references, the page number in Harvey's catalogue (2003), and distribution in the world and Sudan..

Abbreviations used:

{T} = Type species; \* = endemic species, known only from Sudan;

[H 220] = Harvey's catalogue, 2003, p. 220.

## Order Solpugida

### List and distribution of Sudanese species of Order Solpugida

#### I. Family Daesiidae Kraepelin, 1899 2 genera, 6 species (2 \*)

- Genus *Biton*** Karsch, 1880 5 spp. (2 \*)  
*Biton bellulus* (Pocock, 1902) \* - Wadi Sinkat (?).  
*Biton ehrenbergi* Karsch, 1880 {T} - Dunqulah (northern Sudan), Nubia.  
*Biton lividus* Simon, 1882 \* - Sennar, Kordofan: El Obeid.  
*Biton ragazzii* (Kraepelin, 1899) - Port Sudan.  
*Biton wicki* (Birula, 1915) - Abu-Gat, Sennar, Senga, Khartoum, Koshak, Darfur: Kulme.  
**Genus *Blossia*** Simon, 1880 1 sp.  
*Blossia spinosa* Simon, 1880 {T} - Sennar, Dilling, Kur el Affiun (southern Sudan).

#### II. Family Galeodidae Sundevall 1833 3 genera, 8 species (4 \*)

- Genus *Galeodes*** Pallas, 1772 6 spp. (2 \*)  
*Galeodes arabs* C.L.Koch, 1842 – Khartoum, Omdurman, Shendi ?, Mongalla.  
*Galeodes barbarus* Lucas, 1846 - Sudan.  
*Galeodes edentatus* Benoit, 1964 \* - Khartoum.  
*Galeodes granti* Pocock, 1903 - Khartoum and its vicinity.  
*Galeodes kraepelini* Roewer, 1934 - Shendi ?  
*Galeodes schendicus* Roewer, 1934 \* - Shendi.  
**Genus *Othoes*** Hirst, 1911 1 sp. (1 \*)  
*Othoes floweri* Hirst, 1911 {T} \* - Wadi Halfa.  
**Genus *Paragaleodes*** Kraepelin, 1899 1 sp. (1 \*)  
*Paragaleodes sericeus* Kraepelin, 1899 \* - Shendi ?

#### III. Family Rhagodidae Pocock 1897 4 genera, 6 species (6 \*)

- Genus *Rhagodalmia*** Roewer, 1933 1 sp. (1 \*)  
*Rhagodalmia melanocephala* Roewer, 1933 {T} \* - Nubia.  
**Genus *Rhagodessa*** Roewer, 1933 3 spp. (3 \*)  
*Rhagodessa cloudsleythompsoni* Benoit, 1964 \* - N. of Khartoum.  
*Rhagodessa melanocephala* (Simon, 1879) {T} \* - Nubia, Darfur (Zalingei).  
*Rhagodessa sudanensis* Roewer, 1933 \* - Sennar.  
**Genus *Rhagodeya*** Roewer, 1933 1 sp. (1 \*)  
*Rhagodeya nubia* Roewer, 1933 {T} \* - Nubia (Koshesh), Sennar.  
**Genus *Rhagoduna*** Roewer, 1933 1 sp. (1 \*)  
*Rhagoduna nocturna* Roewer, 1933 {T} \* - Sennar.

#### IV. Family Solpugidae Leach 1815 3 genera, 5 species (3 \*)

- Genus *Solpugassa*** Roewer, 1933 1 sp.  
*Solpugassa dentatidens* (Simon, 1879) - Bahr el Jebel or on the banks of the White Nile.  
**Genus *Zeria*** Simon, 1879 3 spp. (2 \*)  
*Zeria fordii* (Hirst, 1907) - Nubia Mountains, Talodi.  
*Zeria funksoni* (Birula, 1915) \* - Galegu, Sennar (Central Sudan).  
*Zeria schweinfurthi* (Karsch, 1880) \* - Jur river (southern Sudan), Djebel Marra.  
**Genus *Zeriassa*** Pocock, 1897 1 sp. (1 \*)  
*Zeriassa sudanica* Roewer, 1933 \* - Sennar.

## Key to Solpugid Families recorded in Sudan

### 1. Anus : ventrally located

### Family RHAGODIDAE

Tarsal segmentation : 1-1-1-1

Heavy-bodied; short-legged; small to large (10-60 mm)

Leg 1 : tarsi : with a pretarsus + 2 claws

metatarsi : with a dense ventral clothing of short spinelike setae

Male cheliceral flagellum : paraxially immovable; composed of 2 flattened, curled, setae that form a nearly complete, slightly curved, truncate, hornlike tube on the mesial surface

Distribution : north-eastern Africa, south-western Asia, and Near East

[27 genera, 98 species]

**-. Anus : terminally located ..... 2**

### 2. Tarsal segmentation : 1-4-4-(6-7)

### Family SOLPUGIDAE

Long-legged; small to large (8-60 mm)

Leg 1 : tarsi : without claws

Male cheliceral flagellum : paraxially immovable; mesodorsal to dorsal, whiplike structure separated from the fixed cheliceral finger by a suture

Distribution : predominantly in Africa [17 genera, 191 species]

**-. Tarsal segmentation : 1-1-1-1 to 1-2-2-4 ..... 3**

### 3. Tarsal claws of legs 2 to 4 : setaceous

### Family GALEODIDAE

Tarsal segmentation : 1-2-2-3

Long-legged; small to large (12-70 mm)

Leg 1 : tarsi : without claws or with 1 or 2 claws

Male cheliceral flagellum : paraxially movable; a single, capitate (terminally enlarged) seta located on the mesial surface

Distribution : northern Africa, and Asia [8 genera, 199 species]

### **-. Tarsal claws of legs 2 to 4 : smooth**

### Family DAESIIDAE

Tarsal segmentation : 1-1-1-1 to 1-2-2-4

Long-legged; tiny to moderate-sized (6-23 mm)

Leg 1 : tarsi : without claws

Male cheliceral flagellum : paraxially movable, ovate to irregular membranous structure attached to the mesial surface by a disk

Propeltidium : exterior lobes : fused

Distribution : Africa, southern Europe, Near East, and South America

[6 subfamilies, 28 genera, 189 species]

\*\*\*\*\*

## I. Family Daesiidae Kraepelin, 1899 2 genera, 6 species (2 \*)

### Key to genera

1. Tarsal segmentation 1-2-2-4

*Biton*

-. Tarsal segmentation 1-1-1-2

*Blossia*

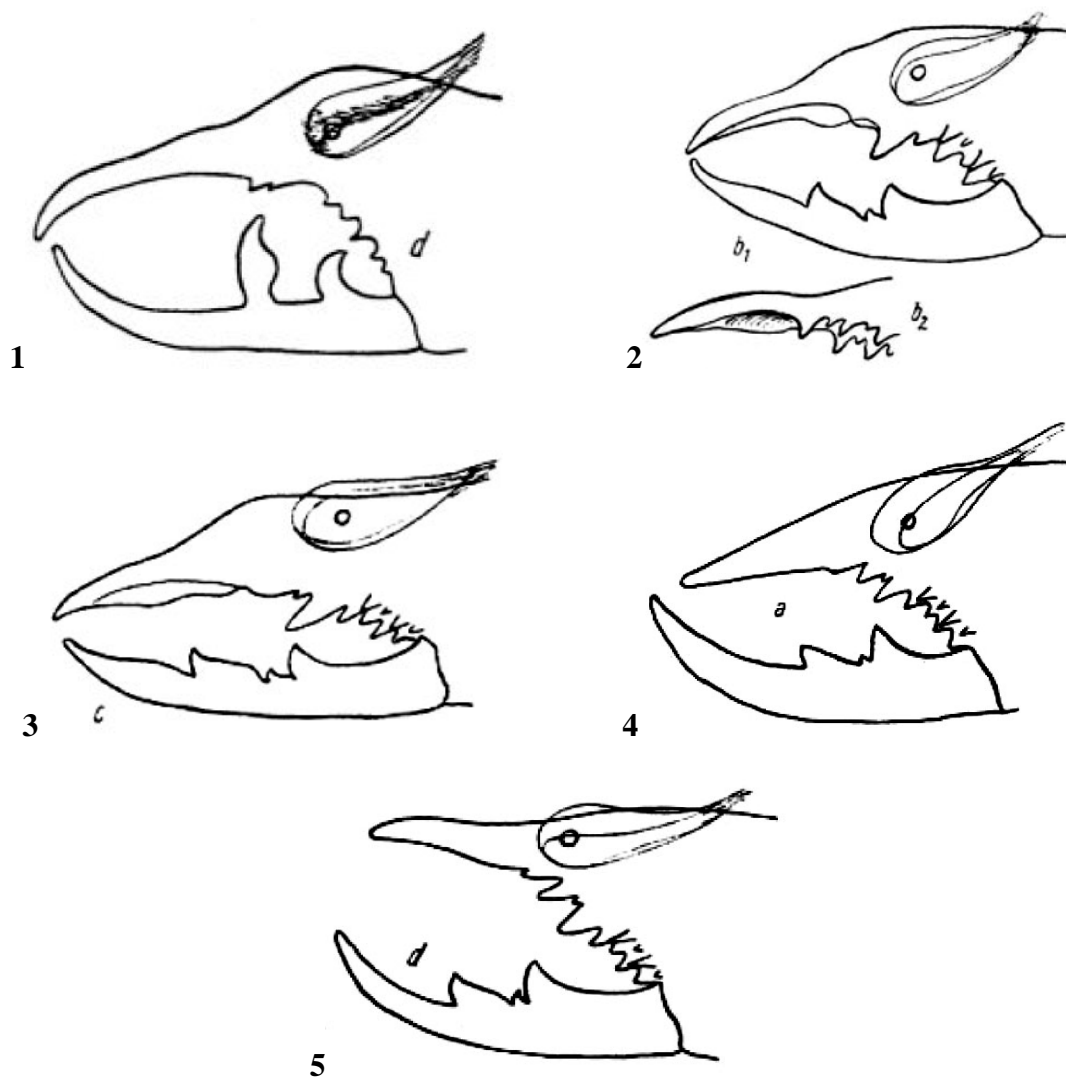
**Genus *Biton* Karsch, 1880**

5 spp. (2 \*)

### Key ♂♂

1. Movable cheliceral finger with 1 front tooth and 1 main tooth; intermediate teeth wanting. Flagellum (Fig. 1). Body length 10 mm ..... *B. ragazzii*

-. Movable cheliceral finger with 1 front tooth, 1 big main tooth and 1 or 2 small intermediate teeth ..... 2



Figs. 1-5. Prolateral view of ♂ right chelicera. (After Roewer, 1933)

1. *Biton ragazzii* (fig. 278 d p.398) 2. *Biton ehrenbergi* (fig. 275 b<sub>1-2</sub> p.389)  
 3. *Biton bellulus* (fig. 275 c p.389) 4. *Biton wicki* (fig. 276 a p.392)  
 5. *Biton lividus* (fig. 277 d p.395) (b<sub>2</sub> = tip of immovable finger oblique-lateral)

2. Edge of immovable finger solid, enlarged behind the tip forming a longitudinal groove against the front tooth of the movable finger. Immobile finger without front teeth (Figs. 2, 3) ..... 3  
 -. Edge of immovable finger without such longitudinal groove. Immobile finger with 1 or 2 distinct front teeth ..... 4

3. Immobile finger without intermediate teeth, with main tooth and 4 median and lateral cheek teeth. Flagellum (Fig. 2). Pedipalp metatarsus ventrally with 1.2.2.2 spines and tarsus with 1 median spine. Colour pale yellow, legs yellow. Body length 14-18 mm

..... ***B. ehrenbergi***

-. Immobile finger with 1 small intermediate tooth before the main tooth. Flagellum (Fig. 3). Pedipalp only with bristles, tarsus without spines. Colour rusty yellow, opisthosomal tergite with 3 narrow yellow long stripes, legs brown. Body length 13 mm

..... ***B. bellulus***

4. Immovable finger with only 1 distinct front tooth and 1 intermediate tooth between the front tooth and the main tooth. Movable finger with 1 intermediate tooth. Flagellum (Fig. 4). Body length 18-20 mm ..... ***B. wicki***  
 -. Immovable finger with 2 distinct front teeth and 1 intermediate tooth between the 2 front teeth and the main tooth. Flagellum (Fig. 5). Body length 10-11 mm ..... ***B. lividus***

**Key ♀♀**

1. Chelicerae quite uniformly rusty yellow, without dark brown longitudinal stripes ..... 2  
 -. Chelicerae with 2 dorsal dark brown longitudinal stripes (often besides a third lateral one). Opisthosomal tergite with more or less distinct brown median stripe ..... 3
2. Tergite of the opisthosoma with distinct brown median stripe. Body length 10-12 mm ..... ***B. lividus***  
 -. Tergite of the opisthosoma only with a hint of a brown median stripe. Body length 18 mm ..... ***B. ehrenbergi***
3. Tergite of the opisthosoma with three brownish longitudinal stripes. Body length 15 mm ..... ***B. bellulus***  
 -. Tergite of the opisthosoma irregularly brownish. Body length 18-20 mm ..... ***B. wicki***

***Biton bellulus* (Pocock, 1902) [H 220]**

Distribution: Sudan (Wadi Sinkat) ?.

Ref: 1. *B. b.* Roewer, 1933 pp. 391, 401, 402 fig. 275c.

Note. In Harvey (2003: p.220) "Type locality: Wadi Sikait, *Al Bahr al Ahmar*, Egypt. Distribution: Egypt". Nevertheless, Roewer (1933: p. 402) mentioned "*Biton bellulus* Pocock 1902 S. 6 (sub *Daesia*). ♂, ♀- Ägypten (Wadi Sinkat)". El-Hennawy (1998) made the same and recorded this species from Egypt too. But Wadi Sinkat is in Sudan (?).

***Biton ehrenbergi* Karsch, 1880 {T} [H 220-221]**

Distribution: Cyprus, Egypt, Ethiopia, Greece, Italy, Palestine, Saudi Arabia, Somalia, Sudan (Dunqulah (as Dongolah), northern Sudan), Tunisia.

Ref: 1. *Daesia e.* Kraepelin, 1901 pp. 96-97 figs. 65-66. [Nubien]

2. *B. e.* Roewer, 1933 pp. 390, 391, 400, 402 figs. 275b<sub>1-2</sub>, 278i.

3. *B. e.* Roewer, 1941 p. 140.

4. *B. e.* Benoit, 1964 pp. 96-97.

5. *B. e.* Delle Cave & Simonetta, 1971 pp. 44-45.

***Biton lividus* Simon, 1882 [H 222]**

Type locality: Aswan (as Assuan), *Aswan*, Egypt.

Distribution: Egypt, Eritrea, Sudan.

Ref: 1. *Daesia livida* Kraepelin, 1901 p. 98. [Ober- Ägypten (Assuan)]

2. *B. l.* Roewer, 1933 p. 403 fig. 277d [Brit. und Ägypt. Sudan (Sennar, Kordofan; El Obeid)].

3. *B. l.* Benoit, 1964 p. 97.

***Biton ragazzii* (Kraepelin, 1899) [H 223]**

Distribution: Djibouti, Eritrea, Sudan.

Ref: 1. *Daesia r.* Kraepelin, 1901 p. 99 fig. 68. [Erythraea]

2. *B. r.* Roewer, 1933 p. 403 fig. 278d [Erythraea, Port Sudan].

3. *B. r.* Roewer, 1941 p. 140.

4. *B. r.* Benoit, 1964 p. 97.

5. *B. r.* Delle Cave & Simonetta, 1971 pp. 46-48.

***Biton wicki*** (Birula, 1915) [H 226]

Type locality: Abu-Gas, Sudan.

Distribution: Egypt, Ethiopia, Somalia, Sudan, Yemen.

Ref: 1. *B. w.* Roewer, 1933 p. 403 fig. 276a [Brit. und Ägypt. Sudan (Abu-Gat, Sennar, Khartoum, Koshak, Darfur: Kulme); Abessinien (Dire Daua); Somaliland].

2. *Daesia w.* Whittick, 1941 pp. 48-49, fig. 8. [Anglo-Egyptian Sudan (Abu-Gat, Sennaar, Senga, Khartoum, Koshak, Darfur)]

3. *B. w.* Benoit, 1964 p. 96.

4. *B. w.* Delle Cave & Simonetta, 1971 p. 56.

**Genus *Blossia*** Simon, 1880

1 sp.

***Blossia spinosa*** Simon, 1880 {T} [H 218]

Type locality: El Mex, *Al Iskandariyah* (Alexandria), Egypt.

Distribution: Algeria, Egypt, Morocco, Palestine, Sudan, Tunisia.

Ref: 1. *B. s.* Simon, 1880 p. 400.

2. *B. s.* Kraepelin, 1901 p. 102 fig. 74.

3. *B. s.* Roewer, 1933 pp. 371-372, figs. 265a<sup>1-2</sup>. [Oberägypten (Sennar, Dilling, Kur el Affiun)] (Fig. 6)

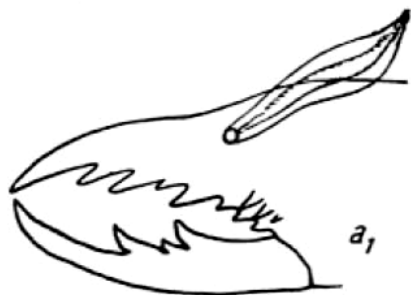


Fig. 6. *Blossia spinosa*, prolateral view of ♂ right chelicera.  
(After Roewer, 1933 fig. 287c p.430)

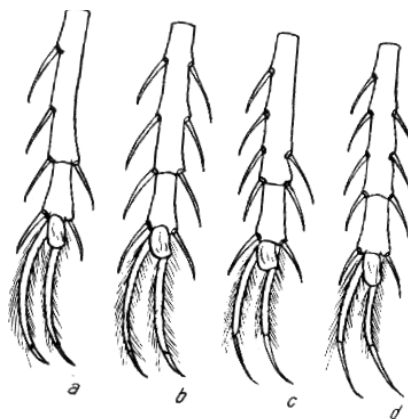


Fig. 7. Tarsal ventral spines of legs.  
a-b. *Galeodes*. c-d. *Othoes*.  
(After Roewer, 1934. fig. 313 d-g p.504)

## II. Family Galeodidae Sundevall 1833 3 genera, 8 species (3 \*)

### Key to genera

1. Claws: unguiculus more or less half the length of the pedunculus of the claw. Tarsi of legs 2 & 3, segments 1 & 2 with 1.1.2.2/2 or 1.2.2.2/2 ventral spines (Fig. 7c, d) ***Othoes***  
-. Claws: unguiculus never more than a quarter of the length of the pedunculus of the claw. Tarsi of legs 2 & 3, segments 1 & 2 with 1.1.2/2 or 2.2.2/2 ventral spines (Fig. 7a, b) ..... 2

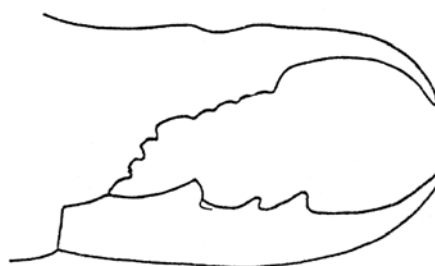
2. Tarsus I with a bush of hairs terminally and either without claws or with only rudimentary ones. Pedipalpal metatarsus of more or less equal thickness throughout its length. Tarsus of pedipalp ovate. Appendages short. Body, especially in the males covered with golden or bright canary yellow hairs. Male flagellum cochleariform, the two sides not symmetrically broadened ***Paragaleodes***

-. Tarsus I with a pair of small terminal claws usually easily seen. Pedipalpal metatarsus slimmer distally. Tarsus of pedipalp more or less pear-shaped. Appendages long. Body not covered with characteristic yellow hairs. Flagellum of male cultriform with the outline symmetrically broadened ***Galeodes***

**Key** ♂♂

1. Movable cheliceral finger with 1 intermediate tooth ..... 2
- Movable cheliceral finger with 2 or 3 intermediate teeth ..... 3
2. Immobile cheliceral finger with 1 intermediate tooth. Metatarsus of the pedipalp, ventrally, without cylindrical bristles. All sternites of the opisthosoma without sensory ctenidia. Plantar bristles of tarsus 4 needle-like (Type I). Colour uniformly brown. Body length 44 mm ..... *G. granti*
- Immobile finger without any clear tooth (Fig. 8). Metatarsus of the pedipalp, ventrally, with 7 pairs of short spines and cylindrical bristles. Sternite 6 of the opisthosoma with ctenidia composed of 14-16 long bristles. Colour yellowish-red. Body length 46-57 mm ..... *G. edentatus*
3. Movable finger with 3 intermediate teeth. Immobile finger with 2 intermediate teeth. Metatarsus of the pedipalp without cylindrical bristles. Colour rusty yellow. Opisthosoma with dorsal black median stripe. Body length 18mm ..... *G. schendicus*
- Movable finger with 2 intermediate teeth. Immobile finger with 1 intermediate tooth ..... 4
4. Metatarsus of the pedipalp, ventrally, without cylindrical bristles. Only sternite 6 of the opisthosoma with ctenidia. Opisthosoma dorsally with entirely black median stripe. Plantar bristles of tarsus 4 obtusely clavate (Type IV). Body length until 34 mm ..... *G. barbarus*
- Metatarsus of the pedipalp, ventrally, with cylindrical bristles. At least sternite 6 of the opisthosoma with ctenidia ..... 5
5. Tarsus 4 ventrally with especially differentiated plantar bristles needle-like (Type I). Sternites 5-7 of the opisthosoma with needle-like (Type I) ctenidia. Colour yellowish brown. Body length 35-51 mm ..... *G. arabs*
- Tarsus 4 ventrally without especially differentiated plantar bristles. Sternite 6 of the opisthosoma with a slanting row of needle-like ctenidia (Type I). Colour loam-yellow. Body length 24 mm ..... *G. kraepelini*

Fig. 8. *Galeodes edentatus* ♂, Right chelicera, exterior (retrolateral) view.  
(After Benoit, 1964 p. 92, fig 2)

**Key** ♀♀

1. Movable cheliceral finger with 1 intermediate tooth (+ one small supplementary tooth, in one case of *G. edentatus*) ..... 2
- Movable cheliceral finger with 2 intermediate teeth. Immobile cheliceral finger with 1 intermediate tooth ..... 3
2. Immobile cheliceral finger with 1 intermediate tooth. Opisthosoma ventrally without ctenidia. Chelicerae rusty yellow with 2 dark longitudinal stripes. Body length 53 mm ..... *G. granti*

- Immovable cheliceral finger without any clear tooth. Sternite 6 of the opisthosoma with ctenidia composed of 14-16 long bristles. Metatarsus of the pedipalp, ventrally, with 7 pairs of short spines and cylindrical bristles. Colour yellowish-red. Body length 29-54 mm ..... ***G. edentatus***

3. Sternite 6 of the opisthosoma with a slanting row of needle-like ctenidia (Type I). Body length until 51 mm ..... ***G. arabs***

- Opisthosoma ventrally without ctenidia but with dorsal distinct dark median stripe. Body length until 34 mm ..... ***G. barbarus***

***Galeodes arabs*** C.L. Koch, 1842 [H 256-257]

Distribution: Algeria, Djibouti, Egypt, Ethiopia, Iran, Iraq, Kenya, Libya, Morocco, Niger, Oman, Palestine, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, Turkey, Yemen.

Ref: 1. *G. a.* Kraepelin, 1901 p. 21. [Sudan]

2. *G. a.* Tullgren, 1909 p. 1 Omdurman.

[Tullgren (1909: p.1) recorded *Galeodes araneoides* (Pallas, 1772) from Shendy, depending on a young specimen. This may be misidentification.]

3. *G. a.* Roewer, 1934 pp. 518-519, 522-523, 532. [Khartoum, Mongalla.]

4. *G. a.* Roewer, 1941 p. 161.

5. *G. a.* Benoit, 1964 p. 97.

***Galeodes barbarus*** Lucas, 1846 [H 259]

Distribution: Algeria, Egypt, Ethiopia, Libya, Morocco, Somalia, Sudan, Tunisia.

Ref: 1. *G. b.* Roewer, 1934 pp. 516, 523, 534.

2. *G. b.* Roewer, 1941 p. 162.

3. *G. b.* Benoit, 1964 pp. 95-96.

***Galeodes edentatus*** Benoit, 1964 [H 262]

Type locality: Khartoum, *Al Khartum*, Sudan.

Distribution: Sudan.

Ref: 1. *G. e.* Benoit, 1964 pp. 92-95, figs 2-5 [Soudan: Khartoum].

***Galeodes granti*** Pocock, 1903 [H 264]

Distribution: Egypt, Ethiopia, Palestine, Saudi Arabia, Somalia, Sudan, Syria, Yemen.

Ref: 1. *G. g.* Roewer, 1934 pp. 515, 522, 532.

2. *G. g.* Roewer, 1941 p. 162.

3. *G. g.* Benoit, 1964 p. 93 [Khartoum et environs].

***Galeodes kraepelini*** Roewer, 1934 [H 265]

Type locality: Egypt (as "Ober-Ägypten").

Distribution: Egypt.

Ref: 1. *G. k.* Roewer, 1934 p. 533 [Ober-Ägypten (genauer Fundort ?)].

Note. The locality of this species may be „Schendi“, in Sudan, like the preceding and succeeding species in the same page.

***Galeodes schendicus*** Roewer, 1934 [H 269]

Type locality: Shendi (as Schendi), *Nile*, Sudan.

Distribution: Sudan.

Ref: 1. *G. s.* Roewer, 1934 p. 533 [Ober-Ägypten (Schendi)].



**Genus *Othoes*** Hirst, 1911

1 sp. (1 \*)

***Othoes floweri*** Hirst, 1911 {T} [H 274]

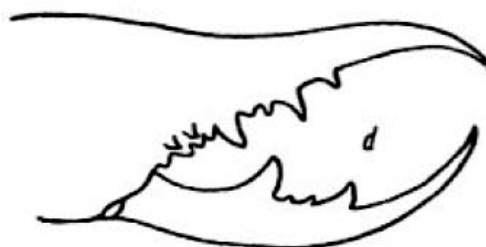
Type locality: Wadi (as Wady) Halfa, Sudan.

Distribution: Sudan (Wadi Halfa), Egypt ?.

Ref: 1. *O. f.* Roewer, 1934 p. 536 fig. 318 a, d Upper Egypt (Wadi Halfa). (Fig. 9)

Fig. 9. *Othoes floweri* ♀, prolateral view of left chelicera.

(After Roewer, 1934 fig. 315d p.535)



**Genus *Paragaleodes*** Kraepelin, 1899

1 sp. (1 \*)

***Paragaleodes sericeus*** Kraepelin, 1899 [H 276]

Type locality: Egypt (as "Oberägypten").

Distribution: Egypt ?, Sudan.

Ref: 1. *P. s.* Kraepelin, 1901 p. 27. [Ober-Ägypten]

2. *Galeodes s.* Roewer, 1934 pp. 517, 523, 533, fig. 317 [Ober-Aegypten (u. a. Schendi)].

Note. This species may be erroneously recorded from Egypt by El-Hennawy (1998: p.22) and Harvey (2003: p.276) following Roewer (1934: p. 533).

### III. Family Rhagodidae Pocock 1897 4 genera, 6 species (6 \*)

#### Key to genera

Number of ventral spines on :

Tarsus 2 & 3	Tarsus 4	Genus
0	1.1	<i>Rhagoduna</i>
1.2	2.2.2.2	<i>Rhagodessa</i>
1.2.2	1.1.2.2	<i>Rhagodeya</i>
2.2.2.2	2.2.2.2	<i>Rhagodalma</i>

**Genus *Rhagodalma*** Roewer, 1933

1 sp. (1 \*)

***Rhagodalma melanocephala*** Roewer, 1933 {T} [H 292]

Type locality: Nubia, Sudan.

Distribution: Sudan.

Ref: 1. *R. m.* Roewer, 1933 p. 288 [Nubien (genaue Lokalität?)].

**Genus *Rhagodessa*** Roewer, 1933

3 spp. (3 \*)

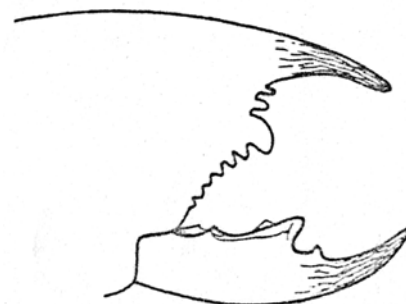
#### Key to species

1. Tibia II and III with 1 dorso-apical spine. Coxae I-III with a line of 6 bacilli. Body and all appendages dark brown, only coxae rusty yellow with red bacilli. Body length 30 mm ..... ***Rhagodessa sudanensis***

-. Tibia II and III with 2 dorso-apical spines. Coxae I-III with a line of 2-4 bacilli. Chelicerae and propeltidium black. Opisthosoma grey yellow with pale dorsal longitudinal band till the quite black anal segment, all coxae, legs and pedipalps rusty yellow, metatarsus black and tarsus I red brown. Body length 20 mm ..... ***Rhagodessa melanocephala***

2. Tibia II with 1 dorso-apical spine and Tibia III with 2 dorso-apical spines. Coxae I-II with 15-16 bacilli, coxae III with 6 bacilli. Prosoma and chelicerae blackish brown, with pale yellow borders and sides. Pedipalps bright brown except metatarsus and tarsus black. Chelicera (Fig. 10). Legs bright brown except tarsus I black. Opisthosoma with a wide median light brown band and black sides. Body length 44 mm .....  
 ..... ***Rhagodessa cloudsleythompsoni***

Fig. 10. *Rhagodessa cloudsleythompsoni* ♀  
 Right chelicera, exterior (retrolateral) view.  
 (After Benoit, 1964 p. 92, fig 1)



***Rhagodessa cloudsleythompsoni*** Benoit, 1964 [H 296]  
 Type locality: N. of Khartoum, *Al Khartum*, Sudan.  
 Distribution: Sudan.  
 Ref: 1. *R. c.* Benoit, 1964 pp. 91-92, fig.1.

***Rhagodessa melanocephala*** (Simon, 1879) {T} [H 297]  
 Type locality: Nubie, Sudan.  
 Distribution: Eritrea, Sudan.  
 Ref: 1. *Rhax m.* sp. nov. Simon, 1879 122-123 "Nubie", ♀ 20 mm.  
 2. *Rhagodes melanocephalus* Kraepelin, 1901 pp. 37-38. [Nubien]  
 3. *R. m.* Roewer, 1933 p. 283 [Nubien, Darfur (Zalingei)].  
 4. *R. m.* Benoit, 1964 p. 97 [Darfur (Nubie)].

***Rhagodessa sudanensis*** Roewer, 1933 [H 297]  
 Type locality: Sennar, *Sennar*, Sudan.  
 Distribution: Sudan.  
 Ref: 1. *R. s.* Roewer, 1933 p. 283 [Sudan (Sennar)].  
 2. *R. s.* Benoit, 1964 p. 97 [Sennar].

**Genus *Rhagodeya*** Roewer, 1933 1 sp. (1 \*)  
***Rhagodeya nubia*** Roewer, 1933 {T} [H 297]  
 Type locality: Koshesh, Sudan; Sennar, *Sennar*, Sudan.  
 Distribution: Sudan.  
 Ref: 1. *R. n.* Roewer, 1933 p. 284 [Nubien (Kosheh, Sennar)].

**Genus *Rhagoduna*** Roewer, 1933 1 sp. (1 \*)  
***Rhagoduna nocturna*** Roewer, 1933 {T} [H 302]  
 Type locality: Sennar, *Sennar*, Sudan.  
 Distribution: Sudan.  
 Ref: 1. *R. n.* Roewer, 1933 p. 271 [Sudan (Sennar)].  
 2. *R. n.* Benoit, 1964 p. 97 [Sennar].

#### IV. Family Solpugidae Leach 1815 3 genera, 5 species (3 \*)

##### Key to genera

1. Deutosternum wedge-shaped. Metatarsus of pedipalp ventrally often spiny. Ventral spination of : segments 2-4 of tarsus 2 & 3 : 2/0/2, segments 2-7 of tarsus 4 : 2/2/0/2/0/2  
*Zeriassa*
- Deutosternum staff-shaped. Metatarsus of pedipalp ventrally never spiny ..... 2
2. Ventral spination of : segments 2-4 of tarsus 2 & 3 : 2/0/2, segments 2-7 of tarsus 4 : 2/2/0/2/0/2  
*Solpugassa*
- Ventral spination of : segments 2-4 of tarsus 2 & 3 : 2/2/2, segments 2-7 of tarsus 4 : 2/2/2/2/0/2  
*Zeria*

**Genus *Solpugassa*** Roewer, 1933

1 sp.

*Solpugassa dentatidens* (Simon, 1879) [H 309]

Type locality: Bahr el Jebel (or White Nile, as rives du fleuve Blanc), Sudan.

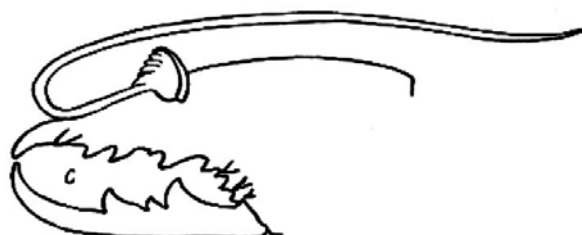
Distribution: Djibouti, Ethiopia, Somalia, Sudan (Bahr el Jebel or on the banks of the White Nile).

Ref: 1. *Gaetulia d.* Simon, 1879 115-116, figs.9, 10 "rives du fleuve Blanc", ♂.

2. *Solpuga d.* Kraepelin, 1901 p. 58. [Weisser Nil]

3. *S. d.* Roewer, 1933 p. 431 fig. 287c. (Fig. 11)

Fig. 11. *Solpugassa dentatidens*,  
prolateral view of ♂ right chelicera.  
(After Roewer, 1933 fig. 287c p.430)

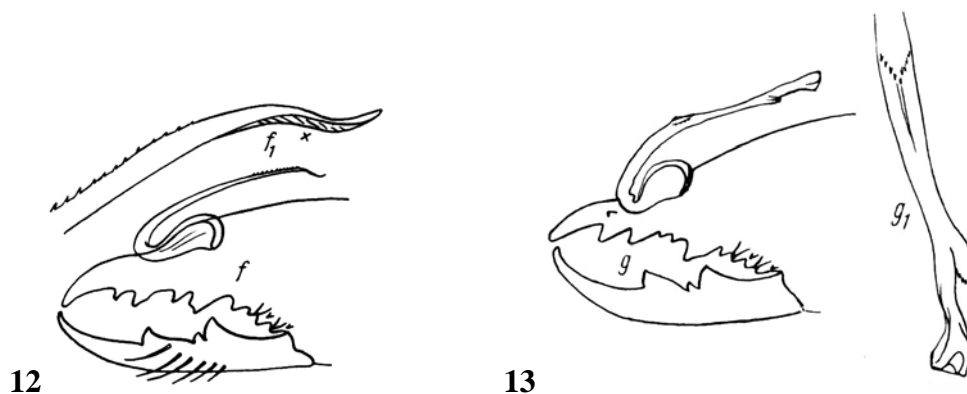


**Genus *Zeria*** Simon, 1879

3 spp. (2 \*)

**Key** ♂♂

1. Flagellum (Fig. 12), its shaft end serrated, with a plain fine pointed end. Body length 32 mm ..... *Zeria schweinfurthi*
- Flagellum (Fig. 13), its shaft end blunt, with small side teeth or projections near the end, with 1, often bright, lobe (Fig. 11), Body length 28-32 mm ..... *Zeria fordii*



Figs. 12-13. Prolateral view of ♂ right chelicera. (After Roewer, 1933)

12. *Zeria schweinfurthi* (fig. 293 f p.445) 13. *Zeria fordii* (fig. 298 g p.453)

$f_1$  = Flagellum shaft end  $g_1$  = Flagellum shaft end, dorsal view.

### Key ♀♀

1. Immovable finger with only 1 intermediate tooth. Body length 32-35 mm ..... *Zeria schweinfurthi*  
- Immovable finger with 2 intermediate teeth. Body length 30 mm ..... *Zeria funksoni*

### *Zeria fordi* (Hirst, 1907) [H 319]

Distribution: Democratic Republic of Congo, Ethiopia, Kenya, Sudan, Tanzania, Uganda.

Ref: 1. *Solpuga f.* Roewer, 1933 p. 463 figs. 298g, g<sup>1</sup> [Sudan: Nuba Mtns., Talodi].

### *Zeria funksoni* (Birula, 1915) \* [H 319]

Type locality: Galegu, *Sennar*, Sudan.

Distribution: Sudan.

Ref: 1. *Solpuga f.* Roewer, 1933 p. 465 [Ägypt. Sudan (Galezu)].

2. *Solpuga f.* Benoit, 1964 p. 97.

### *Zeria schweinfurthi* (Karsch, 1880) \* [H 323]

Type locality: Djur, Sudan.

Distribution: Sudan (Djur).

Ref: 1. *Solpuga s.* Kraepelin, 1901 p. 69 fig. 33. [Sudan (Djur-Gebiet)]

2. *Solpuga s.* Roewer, 1933 p. 464 figs. 293f, f<sup>1</sup> [East-Sudan (Djur-Gebiet, Djebel Marra)].

3. *Solpuga s.* Lawrence, 1953 p. 970 - 1♂, 1♀ (1935.10.17.11-12), Anglo-Egyptian Sudan; collected by Miss M. Steele, 1932.

4. *Solpuga s.* Benoit, 1964 p. 97.

### Genus *Zeriassa* Pocock, 1897

1 sp. (1 \*)

### *Zeriassa sudanica* Roewer, 1933 \* [H 327]

Type locality: Sennar, *Sennar*, Sudan.

Distribution: Sudan (Sennar).

Ref: 1. *Z. s.* Roewer, 1933 p. 428, fig. 284c [Brit.-Aegypt. Sudan (Sennar)].

2. *Zeriassa* sp. Lawrence, 1953 p. 962 - 1 juvenile ♀ (1935.10.17.394), Anglo-Egyptian Sudan; collected by Miss M. Steele, April 1932.

3. *Z. s.* Benoit, 1964 p. 97.

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